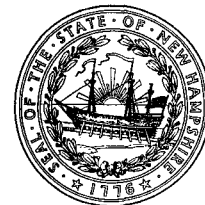




The State of New Hampshire
Department of Environmental Services



Michael P. Nolin
Commissioner

March 31, 2005
Letter of Deficiency
DSP#05-007

Mr. Bill Cantlin
Waterville Company Inc.
P.O. Box 530
Waterville Valley, NH 03223

RE: Snow's Brook Dam #246.08, Waterville Valley

Dear Mr. Cantlin:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on September 24, 2004. During this visual inspection and/or file review, the following items were observed:

1. There is tree and brush growth on the left downstream embankment slope;
2. There is eroded soil (i.e. a foot path) on the downstream left embankment adjacent to the spillway retaining wall;
3. The weep holes located in the left downstream spillway retaining wall contained a build up of orange bacteria and were observed to be wet with non-measurable flow;
4. There is seepage at the downstream end of the left spillway retaining wall. The area was wet with no measurable flow observed;
5. The right downstream embankment slope is a landscaped area mostly containing mulch and low ground cover plants. However, there are a few trees planted in this area;
6. There is a clump of birch trees located approximately 8 feet downstream of the right spillway concrete retaining wall. The trees are located at the top of the dry laid stone masonry wall;
7. There is seepage located along the downstream right river bank approximately 9 paces downstream of the concrete steps located between the 1st and 2nd doors to the building located to the right of the dam;
8. According to photographic documentation in the file, the buildings located adjacent to, and downstream of the dam were built sometime between 1980 and 1997. After reviewing the design plans and photographs, it appears that the building located immediately to the right of the spillway may have been built partially on the dam embankment and may be partially disrupting the gravel toe drain. This may be related to the seepage observed in item 7 above. In addition, the location

of these buildings may effect the hazard classification of the dam. Additional survey data/as-built building information, will be required to determine if the hazard classification should be changed;

9. It appears that some of the flashboard pins have been replaced over time. It is unclear if the newer pins meet specifications of the original design pins; and
10. The operation and maintenance plan (O&M) currently on file needs to be reviewed and updated as necessary.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

August 1, 2005:

1. Remove the brush on the left downstream embankment slope;
2. Repair the soil erosion on the left downstream slope adjacent to the concrete spillway wall;
3. Clean the weep holes located in the left downstream spillway retaining wall. It is important to keep these holes cleaned out so water pressure does not build up behind the wall causing significant structural damage and/or seepage breakout in other locations;
4. On a continuing basis, monitor the seepage located at the downstream end of the left spillway retaining wall;
5. Remove any trees and shrubs from the landscaped area on the downstream right embankment. Although a hearty grass cover is preferred, DES will allow a landscaped mulch cover with minimal low ground cover vegetation;
6. Remove the clump of birch trees located approximately 8 feet downstream of the right spillway concrete retaining wall;
7. On a continuing basis monitor the seepage located along the downstream right river bank. The seepage is located approximately 9 paces downstream of the concrete stairs located between the 1st and 2nd doors to the building located to the right of the dam;
8. Provide DES with a site plan drawn to scale depicting the dam and adjacent building locations. If possible, provide construction documentation and photographs of the building foundation construction. If existing drawings do not exist, an existing conditions survey of the site will need to be conducted. The information should contain elevations of the downstream stream channel and finish floor elevations of the adjacent building. This information will be used to determine if the original dam design has been compromised and to determine if the dam hazard classification is accurate;
9. Investigate and determine if the flashboard pins meet the original design. The design calls for the end pipes to be 1 ¼ inch Standard Steel Pipe, and all other pins to be 1 ½ inch Standard Steel Pipe. Based on the original design criteria, the flashboards should fail with approximately 1 foot of water flowing over them. If improper pins were installed, it will result in the boards either failing at a lower or higher head; and

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10. Review and update the O&M currently on file with the DES.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the bottom of the cover page.

Sincerely,

DM
COPY

Jeffrey M. Blaney, P.E.
Dam Safety Engineer

Attachments Copy of December 1997 O&M on File, DB8, DB13
cc: Gretchen R. Hamel, Legal Unit Administrator ✓

Town of Waterville Valley

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